THE THEORY OF VALUE.

[A REPLY TO PROFESSOR MACVANE.]

This paper has been prepared with the view of replying to the objections raised by Professor Macvane* to the theory of value advanced by the Austrian school of economists. I regret that his criticisms, although published nearly a year ago, have but recently come to my notice. They are directed chiefly against Böhm-Bawerk, and I shall therefore leave him to answer all such points as immediately concern him and confine myself to the relation between marginal utility and cost. The propositions of the Austrian school in question were first advanced by me, and I think I am therefore justified in taking part in the discussion so far as they are concerned. Although I have heretofore avoided every species of polemic with my critics, it is a pleasure to cross swords with so chivalrous an opponent as Professor Macvane, whose attack is so earnest that it must be parried, and whose bearing is so courteous as to raise great hopes of a calm and fruitful discussion.

Before beginning, however, I owe my readers the explanation that the simple reply, first intended by me, has finally developed into an extensive and independent essay. The roots of the theory of value reach out into the field of economic theory, and I believe that the discussion can be brought to a conclusion only by extending it to these ramifications. Professor Macvane will therefore pardon me for directing my polemic not only against him, but above all, against Ricardo, on whose economic conceptions he has based his arguments.

* Böhm-Bawerk on Value and Wages, *Quarterly Journal of Economics*, Oct. 1890.

I.

THE ECONOMIC THEORY OF RICARDO.

(1)

From the standpoint of Ricardo and his school, general economic conditions can best be presented by describing the economy of a hunter, or fisher, or some similar entirely primitive kind of production. Human labor and nothing more is expended to obtain "Commodities," *i. e.*, means for support and comfort. Economically, labor is measured by the effort involved, the commodities by their value and utility. Value, is in the long run, determined by the amount of labor expended, provisionally, by the fluctuations of supply and demand affecting the utility. The products and their value determine the reward of labor (the income) which, like value, has a theory of its own.

Not only the primitive economy of the hunter but also the modern political economy in its full development is reduced to these simple elements. The richest means of production in land and capital, after all, signify nothing else but labor, and have their measure in personal effort, the value of products being ultimately determined by this effort. The theory of value is, however, limited to commodities, while, on the other hand, the theory of distribution is extended so as to include the relations of land and capital. At the same time, in discussing interest and rent (as in discussing the functions of capital, etc.), the simplicity of these economic principles is destroyed by a large number of resulting internal contradictions. Out of the conflict between the necessity of working and the dislike of work on account of the exertion required, arises the economic tendency to reduce as much as possible the necessary effort. This also explains the meaning of the economic balance-sheet. All its figures, however complicated they be, represent, as a rule, quantities of labor, or, more exactly, quantities of effort expended. In the long run the value of commodities is determined by the exertion which is saved owing to their existence. This determines the value cred-

ited to them on the economic balance sheet. Properly, wealth is labor saved.

According to the Austrian school, the economic life results from a different conflict. It is the conflict between the abundance desired by man and the scanty means, continually liable to be reduced, offered for his satisfaction. The struggle against the "too little," the demand for "more" and "much" rears the economic structure. For what other reason should poverty be feared and wealth desired? Wealth is utility or satisfaction secured, poverty the want of it. It is characteristic that Ricardo admits the idea of scarcity in the case of a few commodities only, rarities of all kinds. Of the large number of commodities remaining he says expressly: "They may be multiplied . . . almost without any assignable limit, if we are disposed to bestow the labor necessary to obtain them." We, on the other hand, start with the supposition that only in a few cases abundance is secured, while in all other cases commodities are too scarce and production has its concrete limits. According to our view, utility is the purpose of economic life. Whatever increases utility has value, and as much value as utility is increased. Accordingly, not only commodities have value, but the means of production as well, if they secure products as articles of consumption which otherwise could not have been supplied. For their value is measured by the increase of utility obtained in this way. This is true of land, capital, and also of labor. Labor has value owing to what it produces and the greater value the more it produces.

The definition of value as proposed by our school, is, therefore, comprehensive, since it includes not only commodities but the means of production as well. It is also monistic since it bases itself on utility alone and does not in a dualistic way refer now to utility and now to labor. In our opinion, the same law regulates the temporary fluctuations of value due to supply and demand and its normal level. It is true that cost also exercises an influence on value. There is nothing however in cost which demands a

peculiar explanation. The law of cost is but a special modification of the general law of value based upon "marginal utility."

It is beyond my present purpose to show that we intend to give greater extension and uniformity to the theory of value in another direction, by trying to combine the ideas of value in exchange and value in use.

The opinion which Professor Macvane expresses in regard to our theory is, notwithstanding his complimentary tone, highly unfavorable. He denies that it presents "a fundamental law of value," and thinks it, at best, a new and "less convenient" form of the familiar principle of demand and supply. In his view we only make some contributions to the explanation of the fluctuations of value which follow utility through supply and demand, but nothing to the "broad and permanent features" of value as determined by labor. If this criticism were true we should consider our efforts to be a failure. We tried, above all, to abolish the dualism of labor and utility, that combination of irreconcilable causes, which only proves that the true cause has not yet been recognized. We also wished to bridge over the chasm which yawns between the theory of value and that of distribution, and especially of interest. We hoped that a broad, clear current of theory might reflect the whole economic structure.

If, instead of fulfilling this purpose, we had only rectified a detail in Ricardo's system, and in this way supplemented the latter, we should have, in my opinion, only increased the evil which we intended to cure. If I rightly understand Professor Macvane's criticism, I think that he judges our theory too much from the standpoint of the Ricardian theory of value, in the light of which it is necessarily erroneous. I believe that this is the only reason why he has misunderstood us in essential points. At least every reader of his criticism must misunderstand us. Although I wish my answer to be brief, I must, nevertheless, commence with the discussion of some propositions of economic theory; and

since the most successful way of defence is offensive, I shall begin by attacking my opponent. First I shall endeavor to refute the proposition that all costs may be reduced to labor.

(2)

The critic can only judge what he understands; nay, he must even understand it better than he whom he criticises. I must frankly confess, however, that in the case under discussion I cannot fulfill this first condition of all criticism. I really do not understand the assertion that all costs may be reduced to labor, or, at least, it is so strange to me that I cannot conceive how anyone can maintain it. With regard to this view I am much in the position of the ordinary man, who absolutely and resolutely believes in the reality of things of the outer world in opposition to that philosophical view which regards all physical objects which surround us as only apparent, the fictitious creations of our imaginations. He cannot rid himself of the idea that he can grasp and hold the things. Whatever the philosopher may say in favor of his view, may inspire him with awe and wonder, and, perhaps, with some kind of admiration, but never with clear insight. I am in entirely the same condition when it is asserted that raw material, coal, and machinery could all be completely expressed in terms of labor. Their shapes are too real to me, too concrete to permit me to put an abstraction in their place. I am well aware that the theory which maintains that everything is created by human labor, really implies human labor in connection with the soil of our earth and the other powers of nature. It does not pretend that man creates goods out of nothing. It is only the capital used in production, the means of production created by human civilization, that is to say, the result of human work in a general sense, which it is sought to reduce to labor. I certainly do not object to the assertion that capital is the result of human labor in a general way, but if it is taken literally and means that capital *is* labor, it must be frankly confessed, I can no longer follow the argument in my thought. I say this with perfect sincerity, and with no

shadow of irony. I wish to call the attention of my opponent to the fact that I am here obliged to ignore that which proves a decisive argument to him and to so many other distinguished thinkers. I must say that nothing has made me so doubtful during my study of value as the consciousness, oppressing me like a fault, that I am not able to follow the thought which, in one form or another, appears in the writings of the majority of those who have dealt with economic theory.

I cannot help suspecting that the theoretical writers so eagerly endeavor to eliminate capital from the cost-account because they are not able to explain the part which it plays. The reasoning by means of which the value of the products of labor is derived from the exertion involved in their production only includes those efforts which are felt, and not the inanimate capital. The theorist can come to no practical conclusion regarding capital as a part of the cost of production (*Kapitalkosten*), and, therefore, it must disappear. Of course those who commit this oversight are not conscious of it; they only forget, quite naturally, what is unpleasant to contemplate. Theorists can more easily yield to this instinct of human nature than practical men who are accustomed to feel the opposition of facts. The former may do so the more easily where there exists among them a silent agreement that none of them shall mention the disturbing fact. Such an agreement, it seems to me, exists in the English-American literature with regard to the part which capital plays in the cost-account.

The attempt has often been made to eliminate the inconvenient item of capital from the cost-account and to substitute labor for it. In my opinion this has been done most ingeniously by some Socialistic writers, whose explanation I cannot discuss in this place. Besides the above, two lines of argument have usually been taken. It is either asserted that capital is historically gained through labor, and, if the co-operation of natural forces is left out of consideration, through labor alone; or it is said that even to-day, with our modern methods of

production, capital is originated by labor, and, subject to the mentioned limitation, by labor alone. In both views the cost of the production of capital reduced to labor is substituted for capital; on the former hypothesis it is the cost which has been involved in accumulating capital from the beginning of economic history, in the latter the outlay which is necessary to reproduce the capital consumed.

I will not discuss here how far it is at all possible to estimate the value of a quantity of goods by its cost. I will only point out that with regard to the extent to which cost should be considered in determining value, a certain limitation must be made in theory and practice, namely, that only the necessary or reasonable expenditure shall be taken into account, but not an excess of cost due to an accident. Careless, wasteful, or unskilled labor, which has been employed in excess of what is demanded in an improved mode of production can never enter into the value of the product. Only that amount can come into account which is absolutely necessary for reproducing a commodity, *i. e.*, that which is reasonable according to our present mode of production.

Accordingly, it is evident that the process of originating and accumulating capital, which has been carried on for thousands of years, cannot enter as a factor in determining value. By far the greater part of the exertion by means of which mankind has, in the course of time, acquired this capital, might have been saved, if, from the beginning, the best processes had been known, the greatest industry had been applied, if nothing had been squandered, and especially nothing had been destroyed through violence and war. Only that part of the cost should be reckoned in, which, according to the present condition of things, would be absolutely necessary for reproducing the productive capital already in existence. If new capital were to be produced, it being claimed that capital should be reduced to labor, it would seem but reasonable to produce it entirely by means of labor, without artificial help and without drawing to our

aid any other capital. But who manufactures machines to-day otherwise than by means of machines? Who can do any work to-day without raw material or tools? Nowhere in our modern economy is capital produced by labor alone. Everywhere the new capital is the descendant of previously existing capital. By no form of computation can the factor "capital" be eliminated from the cost of capital.

To the assertion that the quantity of labor invested in the gradual accumulation of capital in the past determines the value of capital, I reply that this historical process is of no significance for the present valuation, even if it should be true that aside from the free natural forces, nothing but labor had been invested in capital from the first. To the assertion that the quantity of labor necessary for the present reproduction of consumed capital be decisive, I reply that, at present, capital can no longer be reproduced by new labor without the co-operation of already existing capital.

In his "Working Principles," Professor Macvane presents an exact analysis of the costs of producing paper in a large factory. In passing, I will note that one-fifth of the entire cost in cash is paid for wages—for absolute labor, the rest, four-fifths of the whole, is expended for machines, raw material, etc. Professor Macvane then continues: "But a little study of the matter enables us to see that the sums paid for machinery, materials, etc., are, in fact, mainly payments of wages in disguise. These sums replace (with a profit) to other employers the wages paid for the production of the machinery, materials, etc." But is this true? The cost-account of the other employers shows again the same state of affairs; only a part of their money expenditure goes for wages, another part, never insignificant and often very considerable, is spent in the acquisition of materials, etc. Each actual cost-account contains items of capital. What right has a theory to ignore them?

I know it is customary to state the matter as if capital, as an item of cost, only appeared in the cost-account as a result of the division of production among several or many

producers. The paper manufacturer who buys his machines from the machine manufacturer, necessarily believes that he acquires capital, while in reality he only buys the fruit of labor, *i. e.*, labor. If all concerns were united under one management, it would be evident at first glance that there was no original expenditure in production besides that of simple labor.

To a certain length I willingly follow this argument, in so far as it concerns newly manufactured half-products which one employer sells to another for the purpose of further elaboration. On the other hand, I regard it as entirely false so far as it concerns capital produced in earlier economic periods, which have long ago elapsed. If poor fishermen during the winter produce a net out of materials which nature furnishes them gratuitously, they create something which is paid for in summer by the fish which they catch by means of it. Their labor is first transformed into the net and then into the fish. Formerly the scanty tools were, perhaps, nothing more than rapidly-passing, transitional forms of human labor which embodied itself, only finally to resolve itself into the finished product, the creation of which was facilitated by this means. The distinction between such a primitive mode of production and the modern one lies in the fact that the capital-power employed in the latter is incomparably greater than that which, in the way just described, can be gained through direct transformation of labor into capital. It would not only be irrational, awkward, and expensive in any productive process to-day to begin *ab ovo* to create the requisite capital by means of labor alone, but it would even be impossible to attain the national income, or even a noteworthy fraction of it in this way. We owe the goods which we consume not only to our industry, but also to the capital which we have inherited from our ancestors, together with labor and Nature. This inherited capital—by the help of which we begin every process of production, without exception—must be considered as an inde-

pendent and indispensable factor in our production, which can be as little ignored as it can be dispensed with.

The proposition that capital is an indispensable factor in production has nothing novel in it to one versed in economic theory. It is discussed in every text-book of political economy in connection with production and its conditions. Professor Macvane also proves it in its proper place, in his "Working Principles" (chap. vii.), and he calls (chap. viii., p. 69.) "the capital of to-day a legacy." He informs his readers that "to those who already have capital, increase is comparatively easy. With the old tools new ones can be made." But if, in the same text-books and systems, we turn from the chapter on production to that on value—capital has disappeared. With regard to value, Professor Macvane classifies all cost into "labor" and "waiting," as others classify cost into labor and abstinence. In this classification capital, as such, has vanished. Only the following alternative is possible: Either capital has no existence whatever in the eyes of the political economist who reduces it to labor—it exists only in the mind of the layman—and in the discussion of production it should only be mentioned as a transitional stage of labor: Or capital has also to be recognized by science, its value must be discussed, its place assigned in the cost-account, and the influence estimated which it exercises on value, together with labor.

Every practical employer is constantly intent on arriving at a clear statement of his cost-account, including capital. Without it his book-keeping would be regarded as very incomplete. Imagine the manager of a large business who is engaged in drawing up a statement of his earnings and running expenses becoming puzzled in his calculations respecting his investments, discounts, a possible fall in value, etc. Let him try to inform himself about the meaning and significance of his calculations by reading theoretical works on value. What a surprise it would be to him not to find any information about these operations, but discover that everywhere capital is identified with labor. At first he may

perhaps be in doubt whether his calculations are without sense, or the theory without use, but soon he will decide that the latter is the case. It would certainly be no sufficient theoretical explanation of value, if merely the practical valuations, as they are generally made, were repeated. It is necessary that theory should rise above practice, especially above the individual case. But on the other hand, it would be entirely out of place to give a theory of value which should entirely ignore practical views of value and their origin. The physician who studies the diseases of the human body regards the testimony of the patient only as hints and suggestions, which he knows often enough mislead, his real object is the silent body itself. To the political economist, who studies the problem of value, the practical valuations are more than symptoms, they are the thing itself. It is his task to unfold their meaning, to state it in a more comprehensible, clear and complete form than the practical man could do it; but certainly not in a way which leaves entirely the sphere of economic experience.

(3)

Professor Macvane is right in supposing that the Austrian economists would reject the explanation of value based exclusively on exertion, even if it were true that the cost of capital could be reduced in every case to the cost of labor. We have a number of further objections, and we do not stand alone in this respect. They have been raised over and over again. It will suffice to mention one of them, which seems to me to be the most important in the principle underlying it.

According to the labor theory, labor should be estimated and paid in proportion to the effort and danger which it involves. The most painful and dangerous efforts would accordingly have the highest value. It is impossible to draw a different conclusion from the labor theory. And now let every reader ask himself whether experience affirms the supposition that the most painful and dangerous labor really

receives the highest wages. I believe even he who professes the labor theory will be compelled to grant that experience contradicts his theory, and that he would gladly be relieved of the necessity of proving that this contradiction is only apparent, and that experience really supports his view. I, at least, do not envy the theorist, who is forced of necessity to attempt such an explanation. It is certain that from a mere observation of wages nobody could have conceived the idea that the value of labor is determined by the hardship involved.

Confronted by this obstacle, Professor Macvane exhibits a degree of sincerity and sagacity which does him honor. He does not, like many others, simply skip the subject, without having given an explanation, but he discusses it thoroughly. He says (p. 98 of his "Principles") that the opinion of the laborers themselves as to what is painful or dangerous—be his opinion justifiable or not—must be decisive in estimating the effort and danger of labor. "What they think hard or dangerous, or disagreeable, is, for our present purposes, hard or dangerous, or disagreeable; what they think easy and pleasant, is easy and pleasant." This thought would lead to the conclusion that every one who is satisfied with certain wages for a certain effort, while others receive higher wages for less effort, would thereby silently admit that he regarded his effort as the less painful. I do not know whether Professor Macvane intends to go so far. It would not appear difficult to one apt in dialectics to present arguments in favor of Professor Macvane's interpretation; but all artifices of dialectics will prove nothing against the silent sighs which accompany the hard labor of the poor.

How would the manufacturer answer the question; by what standard does he grade the payment of wages? Without doubt he would say, according to the skill of the workmen and the services which they render him in his business. He will confess, that in certain cases, when he requires increased efforts, he will be obliged to increase wages in pro-

portion, but he will not indicate exertion as the absolute standard by which he grades labor. He will be compelled to increase the wages of the laborer who has a secured income, in order to induce him to undertake harder work, while, on the other hand, he only needs to offer starvation wages to the laborer who only has the choice between earning nothing and submitting to the heaviest work for the meagerest wages. It can only be said with exactness that labor can be had for the mere remuneration of its effort in case an abundant supply of it is at hand.

(4)

Ricardo, and those who deduce value from labor, advance what at bottom amounts to the following argument: If a certain expenditure of labor, though relatively very small, must be made for the sake of obtaining useful things, each of these things has value or importance, simply because by the possession of the article labor is saved; the measure of value is not to be found in the utility of the article created, but in the often comparatively small quantity of labor through the sacrifice of which the article in question can always be reproduced. If the articles of utility could really be regularly obtained through a sacrifice of labor, his theory would be tenable. It would be necessary that any supply of commodities could be reproduced by means of the naturally free sources of production through more effort. In other words, we should expect that every one would be justified in consuming as much as would be the equivalent of the sacrifice of labor which he was willing to make. No satisfaction should be denied to him who is willing to work for it. Unfortunately, human labor cannot thus produce commodities indefinitely. In the first place, in order to make labor fruitful, we need capital in addition; and secondly, there is not always a sufficient quantity of labor available to carry on every kind of production which might be desired. The Ricardian theory of value is faulty, because the theory of economics which it presupposes, is faulty. Its premises re-

garding economic facts are wrong, while the reasoning by means of which it deduces conclusions from these false premises is unassailable. Its reasoning as such is absolutely convincing and hence the exceedingly great logical attraction which it has exercised, and continues to exercise ,on so many people in spite of its evident opposition to facts. The conception of value at which this theory arrives, although clear and attractive, cannot be applied to our economic conditions. Not less so the law of value, which, it may be remarked in passing, has a very close inner affinity with the law of marginal utility ; and in general, however strange it may sound, Ricardo's conception of value is very nearly related to that of value in use. No other anterior theory has shed so much light on the inner working of the economic world.

In my opinion, the part which this theory has played in the historical development of the doctrine of value, can best be characterized by comparing it to the "extensive" or primitive cultivation of land. Under a few striking half truths it buries the absolute truth which lies deeper. In its simplicity and force it satisfies the first primitive demand for explanation. But progressing science will necessarily formulate a more "intensive" theory, which will set forth a higher truth, although with a large expenditure of explanatory effort. Even if we overlook the fact that entirely different economic conditions must be presupposed—a limited, instead of a plentiful supply of commodities—it is, nevertheless, necessary to examine the value of the means of production in connection with the value of the products. Even if it were true, that all means of production could be reduced to labor, it would be necessary to examine the value of labor. Professor Macvane says "that the relation of product to exertion is that of reward, and reward only." He evidently thinks that with regard to labor, only the returns—the income, should be considered, and not the value. But experience seems to prove the contrary. Wherever a return is yielded, the aim appears to be primarily to determine the

value of the sources of this return. Everywhere value is used as a clue to pass from the fruits which have value to the economic means of production which yield the fruits, however numerous or distantly related they may be. Is not this the daily business of the exchange? With the same money, means of production and commodities are paid for in proportion to their value, and are exchanged accordingly. We cannot therefore avoid the conclusion that both are embraced in the same conception of value. If Professor Macvane asks why the Austrian School attributes value to the means of production, to those goods which form a part of the costs, I can only answer: We do it because it is done everywhere, without exception, in economic life.

II.

COST AND MARGINAL UTILITY.

(5)

Ricardo's explanation of value presupposes that the whole process of production would admit of a uniform valuation according to the feeling of personal exertion, and that such a valuation is actually carried on every day. It regards this apparatus as one immense body conscious of its efforts. The Austrian School seeks the uniform measure for estimating the value of the means of production and of the commodities, in the utility which they both create. Men consider as primarily useful the means of subsistence and those other commodities which directly satisfy personal wants; in a secondary sense also, all means of production by which the former are obtained, in proportion as these means aid in the production. Can one imagine a more natural, simple and conclusive conception of the utility of commodities? It is true it is not inherent utility which political economy takes as the standard of valuation. The most useful things are often entirely without value in the economic world. Nobody has recognized this fact more clearly than Ricardo, and I believe that in the

history of the theory of value it will be held as the lasting merit of his school to have revealed the opposition between value and utility. But his school committed a mistake in overestimating this opposition and in making it a complete contradiction, while in reality there exists a close logical relation between the two conceptions.

Articles which have utility have value only on the condition that they cannot at all times be obtained in any desired quantity. Certainly even in the midst of the abundance of Paradise satisfaction may be secured and has value as such, but the value of satisfaction will not be transferred to the thing which satisfies, because another article can always be obtained in its stead which will give the same satisfaction. The idea of value extends to commodities only when they can not be had in an abundance which would satisfy all possible demands. The idea of the importance of property only originates in scarcity.

Even in the case where goods are not obtainable in abundance, they are not estimated by the total utility which they possess, but generally only by a part of it. The law which determines this quantity of utility has been called the *law of marginal utility* by the Austrian School. The content of this law is shortly expressed as follows: A commodity is not valued according to the utility which it actually possesses, but by that degree of utility only which is dependent upon that particular commodity, *i.e.*, that degree of utility which could not be enjoyed without possessing the commodity in question. One who has an annual income of ten thousand guldens and wants to spend it, let us say in a thousand different ways, will not estimate the gulden which he is going to spend for the most necessary article according to its importance, but according to the importance of the least necessary of the thousand articles to be acquired, for only the latter would not be obtained if this one gulden should be lost.

The law of marginal utility, if rightly understood, includes the law of cost. I must therefore beg the reader's

permission to develop somewhat minutely our views on this point.

(6)

The degree of utility possessed by the means of production depends entirely upon the degree of utility of the commodities produced by means of them and is based upon this. Indeed, in principle, these two qualities are mathematically equal, excepting perhaps that difference which is expressed in the rate of the discount and which may be neglected here. According to the view taken by the Austrian School the estimation of value should begin like the estimation of utility, upon which it is based, with the products, and proceed thence to the means of production. The consequence of this is that the utility and value of the means of production prove to be no more identical than the utility and value of the products. Thus, for example, the value of the harvests is usually estimated much lower than its total utility, and consequently the value of the large productive group represented by land, agricultural capital and labor must be correspondingly less than their total utility. Of course the value of the products only extends to such means of production as are not to be had in indefinite quantities. Labor, likewise, receives its share of value wherever it has helped in producing and cannot be obtained in unlimited quantities.

It is not at all necessary to take into account the arduousness of the labor in order to explain its value. Under the supposed conditions value would be accorded to labor even if it involved no expenditure of effort whatever. In principle, therefore, the value of the commodities and the value of the means of production are identical and the former forms the basis of the latter. But what is cost? And how is it that in observing economic life we receive the distinct impression that the means of production regarded as cost determine the value of the product?

Nobody will doubt that the value of a mineral spring which serves no other purpose than that of furnishing water

for drinking, receives its value from the utility which is attributed to the water, and that it loses its value so soon as this ceases to be esteemed. In the same way iron or coal or common labor derives its value from the utility of the commodities produced with its help. If the contrary appears to be true and the latter appear to derive their value from the expenditure of the former, this can only be due to the fact that the applications of iron or coal or common labor are so exceedingly manifold. Their value is only determined by the totality of what they produce. A single product may, however, contribute nothing observable to this value. If a small mill fails or a household disappears and coal is no longer consumed by them, the effect on the market is practically inappreciable. If the value of the means of production be actually compared with that of their individual products, the former will be considered as the stable, permanent and significant element, the latter as fluctuating and subordinate. The value of the iron reflects that of the commodities produced from it, but owing to the fact that the former concentrates, so to speak, all the rays as in a focus, its illuminating power is greater than that of any single ray.

But this is not all. The practical capitalist only theorizes so far as seems absolutely necessary. He would never make such a comparison of the value of the means of production with that of the products unless compelled by circumstances. Every capitalist must in his own interest adapt his business to the general conditions of the market, if he wants it to maintain itself profitably. So far as he resorts to means of production which have other applications as well, he finds that they have a given value. He must pay for them, and the value of the goods which he produces must replace this expenditure. In this sense he has to adapt the value of the commodities to the value of the means of production. Thus originates the conception of cost. Cost consists in means of production having manifold applications, like iron, coal, and common labor, which even when they are employed in the production of a single commodity, are still estimated accord-

ing to the value which they have in all their applications. The hundreds and thousands of different kinds of materials and tools prepared for production are counted, weighed, and measured according to the utility which they are to create, and in view of their importance most zealously guarded by their possessors. In the same way the different kinds of labor are assorted according to the utility expected from them, and arranged according to a classification which differs essentially from that which would result if the effort involved should be taken into consideration. The unlimited possession of useful productive materials and forces forms the basis of the economic confidence of modern society. Since each productive process diminishes this possession, it reduces utility—it *costs*, and it costs exactly as much as the value which the material and labor required would have produced if rationally applied. It is evident that a consideration of the cost does not, in the view taken above, produce the value of the commodities. The capitalist cannot in any way base upon the expenses he has incurred a successful claim that his customers should pay a price which would cover this outlay. The buyers pay according to their valuation of the commodities. The consideration of the cost has primarily only the effect of influencing the supply continually put on the market by the producers. Based upon the supply on the market (which is determined as above indicated), the value of the commodities continues to depend upon their utility, and the fact remains unshaken that this utility finally determines the value of means of production. At the sale of the products the capitalists continually rectify their calculations, and according to their gains or losses the value of the means of production increases or diminishes in their estimation. They contribute each in his own way and according to the measure of his influence, to maintain or alter the market-value of the means of production, which constantly regulates the wheels of industry.

There are, however, cases where, without influencing the quantity of the production, the cost directly determines the

value of the commodities. It must suffice here to illustrate this by a single example. Suppose the railroad system of a country to be completed, and consequently the annual demand for rails is limited to that quantity which is required to replace the wear and tear. Let us suppose, furthermore, that the value of iron, owing to an immense increase in the production of that metal, considerably decreases—what will be the effect on the value of rails? Their utility does not apparently change, nor the quantity produced, nevertheless their value will decrease for the very reason that the cost has lessened, and exactly so far as the cost has lessened. If the production of rails were monopolized, the former price could be maintained, and the fact that the rails had decreased in value would only come into account in the internal production. Free competition, however, will compel the producer to adapt the price to the rectified valuation and to allow the consumers to participate in the reduction of the value.

Without further analyzing these cases, mentioned as illustrations, I shall only show their general theoretical importance. We have here to do with a new application of the "law of marginal utility." The utility of the rails no longer depends upon their possession nor even upon their marginal utility, but only upon the still lower marginal utility of the material, labor, etc., which are requisite for their production. The value of these materials, labor, etc., is determined by that of commodities having a still lower marginal utility than the rails, for example, ordinary tools. The value of rails is therefore determined: (1) by the quantities of iron, etc., required; and (2) by the utility which these have in their most unimportant application in other productive processes. Although the rails do not owe their value to *their* utility, they owe it to *some kind of utility*—primarily to that of the means of production employed; finally to the marginal utility of certain other commodities. In the cases in question, the value of commodities is not estimated "specifically," but the commodities are regarded as compounds of their productive elements, of

several factors, to each of which a certain value is ascribed. The rails represent a certain amount of iron and labor, and are so estimated. Where large supplies of finished commodities are at hand which are sufficient to satisfy the most urgent demands and which are always supplemented by reproduction, this kind of valuation becomes quite general. It is the prevailing one in every well regulated form of production. Commodities in the manufacture of which different quantities of like elements are employed, are valued in the same ratio as these, that is to say, the quantities of the means of production required determine the relative value. From this arises the natural impression that they determine the value of commodities in general, and one forgets that it is necessary to seek for the absolute value. It is not sufficient to know what quantities of iron are required for certain commodities, but it is necessary as well to know the absolute value of the iron, and this is finally determined by the value of the products manufactured out of it. If, however, supply and demand are too seriously interfered with it is no longer possible to estimate the products by the value of the means of production. They are then estimated as "specific goods," that is, rails as rails. Then the utility, *i. e.*, the marginal utility of the rails determines their value. After the disturbance has ceased and production has again become regular, commodities are once more valued according to their cost, which is in turn, as has been shown, nothing but a complicated form of value in use.

Thus utility is always the decisive element, and, according to the same law, it is the marginal utility which is decisive. Circumstances, however, change in such a way that now a direct, now an indirect, now the specific, now an external utility constitutes the marginal utility. The Austrian School does not in any way destroy the idea of cost or the law of cost, it only endeavors to combine both with the general idea of value and its general law, and to explain them in this way. Our hope is to get beyond the old scho-

lastic controversy, whether value is determined by cost, or, conversely, cost by value.

(7)

Professor Macvane rejects our conception of the influence of cost on value. He says: "It seems to involve a begging of the question." "The principle of cost," he continues, "is too broad to be admitted by a side door, or as an afterthought. If the reason why coats have a higher value than shoes be that coats have a greater final utility, that ought to be the end of the story. To add, as an incidental circumstance, that coats are also more difficult to make and so ought to have a higher value, has the appearance of putting the controlling factor in a curiously subordinate place."

I cannot quite understand this objection made against us. I find that it is not our view which he criticises. We do not admit the principle of cost by a side door, but, on the contrary, it is admitted without secrecy through the main portal of our theory. One principle is that value is derived from utility, and quite in harmony with this principle, we assert that cost is, after all, according to the general law of value, that of marginal utility, measured by utility alone.

But it should not be overlooked as, in my opinion, has been done by Professor Macvane, that, in speaking of utility (and marginal utility), we purposely put "the end of the story" a little further back than Ricardo and the Ricardians. In the case of the coat, as in the case of any other commodity, utility must be considered in two ways: First, in so far as it is useful itself; and, secondly, in so far as utility is attributed to the labor, materials, etc., by means of which it is produced and by means of which, at the same time, other commodities are produced. If, at a given moment, the marginal utility of coats equals one hundred, while the other commodities produced with the same means of production, and consequently the requisite means of production themselves, have a marginal utility of fifty, the result will be an endeavor to produce more coats. Now since the manufac-

ture of these means a profitable utilization of the means of production, this endeavor will continue until, by the increase of quantity, the marginal utility of coats has likewise been reduced to fifty. Then the value of the commodity and of the materials will become identical, and not, indeed, by any accident, but by the intentional realization of the most essential functions of economic life. But it may also happen that so many coats cannot be used, and consequently that an increase of production is not called for. Coats will then maintain the value one hundred as directly estimated by their marginal utility. But even in this case their value will ultimately equal fifty or the cost-value, if, at this value, they can be constantly and uninterruptedly placed upon the market. This result, also, will not be accidental, but the result of the general law of value—the "law of marginal utility." Goods are not valued according to the utility which they themselves possess when a lower utility is dependent upon them, but according to this lower utility. In the given case a man who loses his coat does not lose the utility of one hundred, but only of fifty, which the requisite means of production would have yielded if applied in other ways. This utility is the marginal one and decisive for value.

(8)

"I am unable to conceive," Professor Macvane says, "of the attribute of exchange value as belonging to the cost of products. That would be to regard producers as carrying on a kind of exchange with nature, giving productive exertions in return for commodities. . . . But this way of looking at things does not seem to promise very useful results."

I have already said that the Austrians recognize the value of the means of production because they observe that it is recognized everywhere in economic life. We believe that it is our task to explain value wherever we may find it. The theorist may always be sure that value, wherever it is found, has a meaning. The actual calculation of the economic world constitutes an unsurpassable work of art in which

nothing is isolated or unconnected, and it is not completely grasped by theory so long as anything in it seems to be without connection with the other portions of the system.

It is, in my opinion, not at all impossible to explain the meaning which lies in the customary valuation of the means of production and the cost-account based upon it. It is a fact of highest importance that the value of productive property and of productive powers anticipates the expected value of the commodities. It is in consequence of this fact that if productive materials and forces are employed in production and are thus either converted into fixed capital or consumed, we are continually admonished that the full value of the fruits expected must be derived from them. In this way, in the valuation of the means of production, the future commodities have already been taken into account. Their production is planned with the purpose of attaining the highest possible utility and is carried out with this end in view.

It is especially important to aim at the most advantageous utilization of those means of production which allow a manifold application. In order that the highest possible utility be obtained from them it is necessary to balance all their applications against each other. A condition of equilibrium must be established. Too much must not be manufactured of one product and too little of another, for otherwise the necessary would be sacrificed to the superfluous and the highest attainable utility would not be reached. It seems that without exact statistics of supply and demand production must proceed in the dark and often mistake its way. If, nevertheless, as is shown by experience, the right proportion between the different kinds of production is generally maintained, although the statistics are not exact and are often entirely wanting, it is due to the circumstance that another expedient presents itself, viz., to consult the value of the means of production as determined by the relation of supply and demand in the past. Every producer strives to manufacture that quantity of goods which will cause the value of the commodities to replace at least the

value of the means of production. His own interests demand this, for the means of production are his outlay which must be restored to him in the shape of the commodities produced. At the same time he renders, unconsciously, a great economic service, he helps to regulate production so that a general equilibrium results and the means of production yield the greatest possible utility.

"To count the cost" means in a single case to estimate the value of the means of production, having a manifold application, by that value which results from the totality of their applications. The outcome of the fact that the value is thus estimated in each single case is, that the means of production are distributed in such a way with regard to the commodities that the highest possible utility is attained.

This fact also explains why the endeavor is continually made to re-adjust the disturbances of production above mentioned which cause commodities to be valued for a time according to their "specific utility," instead of according to their cost. Hence the valuation according to "cost" implies the just and most efficient distribution of the means of production among all the various kinds of productions; the valuation according to "utility," on the other hand, indicates a disturbance, owing to which one branch of production is isolated from the other branches and consequently the equilibrium is destroyed.

It is primarily the individual capitalist who makes his calculation according to cost in his own interest. Free competition, however, compels him to apply the same calculation in selling to his customers and in this way to give to consumption that extent which corresponds to the production.

(9)

I now come to that part of Professor Macvane's criticism which, while it deals apparently only with a single detail, involves in reality the most comprehensive conclusions.

The Austrian School explains exchange by the value in use; each party to the exchange endeavors to gain in value

in use. If the commodities parted with have a value in use of ten, the article received in exchange must necessarily have a higher value than ten in order that the exchange may take place. In the case of the other party to the exchange the valuation will be reversed; here a higher value is attached to that which received a lower estimate in the first instance.

Professor Macvane is right in showing that under the supremacy of the division of labor the products very frequently, if not generally, have no value in use at all to the producer who wants to sell them. He thinks that our theory has not taken this fact into account. But in this he is quite mistaken. We have taken it into account, and it is in complete harmony with our theory of exchange.

Although the commodity has no value in use to the seller, yet the price which he receives has an indirect value in use to him, since it enables him to buy goods of direct value in use. On this account he is influenced by those motives which, in our opinion, lead to the exchange. We presuppose a difference between the value in use of the article received and that of the article given in exchange. This difference does not disappear when the article given in exchange has a value in use equal to zero, but rather reaches its maximum in this case.

It is proper to emphasize in this place that the Ricardian theory offers no explanation of exchange. According to Ricardo, articles of equal cost have equal value; what inducement is there to exchange articles of equal value? It is evident that the parties to the exchange are influenced by some consideration of the utility of the goods exchanged. But utility as such does not lead to economic transactions. Nobody pays for the useful air, nobody pays for victuals in proportion to their total utility. In order to explain exchange, it is necessary to determine the real economic measure of utility: that measure the Austrains believe they have found in the idea of marginal utility. In this way the idea of marginal utility may enter the breach which the Ricardian

theory of exchange leaves open. If it succeed in this, the former theory will, I am convinced, suffer a signal and complete defeat.

(10)

The point above discussed, leads Professor Macvane to the final principles of political economy. According to him, the Ricardian theory clearly reveals the fundamental plan of the economic world. It is the endeavor of each individual to obtain the greatest possible result by the least possible effort; and thus he makes the best application of his powers. Division of labor and free competition make it possible that the endeavor of each individual should redound to the advantage of society; so that finally the maximum of general advantage is attained by the minimum expenditure of general effort.

Professor Macvane thinks that on account of its erroneous conception of the motives of exchange our theory does not serve to explain the movements of this economic mechanism. I have just shown that the conditions produced by the division of labor are the same which we presuppose for exchange. Whatever may be said in favor of division of labor and free competition, as an explanation of the fact that the individual is compelled to work in the interest of society, can also be said of our theory of value and exchange.

I even maintain that the explanation of this process from the standpoint of the Ricardian theory is not by far as clear as that reached from our standpoint. Ricardo's theory does not in any way contain an explanation of exchange. In general, a theory can only explain the meaning of the economy of the world at large in so far as it succeeds in explaining the economy of the individual. The Ricardian theory only takes into account the quantities of labor expended, and only in so far as these are concerned does it trace the effects of the division of labor and of free competition and show how the individual is situated in his relation to the welfare of the whole. If this theory aims to show that the greatest possible results may be attained by the least possible effort,

it certainly does not explain how to measure the degree of this success. It is not sufficient to point to utility alone as this measure, for utility as such is nowhere decisive in the economic world. Since Ricardo has no measure for the results, that is, for the economic gain, he is not able to explain the nature of exchange.

Jevons and his school have in this respect progressed far beyond the standpoint of Ricardo. Jevons estimated utility by the standard of the marginal utility. He is able to correlate expenditure and gain in production as well as sacrifice and its reward in exchange. The economic balance-sheet is according to his theory "a calculus of pain and pleasure," and the word "calculus" has its definite sense in this connection because Jevons actually understood how ingeniously to measure "pleasure."

But not even Jevons has, in our opinion, succeeded in giving a satisfactory explanation of the nature of the economic balance-sheet. He has an insufficient measure for the economic expenditure because he measured it according to "pain." The principle of gaining the maximum of pleasure for the minimum of pain may suffice well enough when men gain sensual pleasures by means of physical exertions. If the utilitarians are right the highest rule of moral conduct may even be deduced from this principle. But it cannot without modification be applied in political economy and especially in relation to production, because the latter requires not only *personal* sacrifices, but also the sacrifice of *material objects*. These, however, represent the possessions of the producer, the sacrifice of which does not necessarily imply any feeling of pain. Certainly, no new principle is in this way introduced into political economy, since we estimate the goods which constitute our wealth by no other standard than their utility for us. But it remains for theory to explain according to what laws we connect the idea of utility—of pleasure—with the goods which compose wealth. We estimate them not only according to the minimum of pain, but we consider them at the same time as a condition of pleasure, and it is according

to this pleasure that we estimate their value. The musician whose painless performances delight his hearers, would reckon but poorly if he should estimate his performances by his pain and not by the delight of the public. The calculations of political economy will only be satisfactorily explained when the general and, for this reason, insignificant formula of "the calculus of pleasure and pain" is applied to these complicated conditions and the special rules are formulated which result from such an application. "To gain the maximum of booty with the minimum of effort" may be the simple sense of the economic reckoning of a hunter who has nothing to save but his strength. The economic reckoning in the age of capital is, however, harder to explain. There is more behind the mysteries of commercial bookkeeping than may be dreamt of in the philosophy of the hunter, and a formula explaining the latter would be but ill adapted for the interpretation of the former.

What I have said above in regard to the conception of cost and the meaning of the cost-account shows how we attempt to carry out the "calculus of pleasure" with regard to productive property. However, I cannot enter into further details here, nor can I develop the influence which in our opinion, is to be attributed to the effort expended by labor. Although we deny that this enters as such into the value of the commodities, we do not, of course, mean in any sense to banish it from the sphere of economic speculation.

F. VON WIESER.

German University of Prague.